



On LHD 19th Campaign

LHD Experiment Board

16th CWGM (Jan. 20, 2017)

LHD Experiment Technical Guide (revised for deuterium experiment) is available
(Please contact your host in NIFS)

Thank you for your experiment proposals



In particular, packaged proposals from EUROfusion (compiled by A.Alonso)

Proponent	Host in NIFS	Title
Arturo Alonso (CIEMAT)	M. Yokoyama	Using central ECRH heated plasmas to test basic properties of core transport in LHD and W7X.
Juergen Baldzuhn (IPP)	R. Sakamoto	Conduction of pellet injection experiments
Alvaro Cappa (CIEMAT)	K. Nagaoka	Impact of ECRH on Alfvén Eigenmodes
Philippe Drews (Julich)	Y. Suzuki	Beta effects on the 3D magnetic topology and edge plasma transport in LHD
Golo Fuchert (IPP)	M. Yokoyama	Comparative study of soft density limit at very low ECRH power in LHD and W7-X
Carlos Hidalgo (CIEMAT)	K. Tanaka, S. Masuzaki, T. Tokuzawa	Influence of isotope mass, edge sheared flows and turbulence on Edge-SOL coupling
Carlos Hidalgo (CIEMAT)	K. Ida	Influence of magnetic configurations with different zonal flow damping on the isotope effect.
Peter Drewelow (IPP)	S. Masuzaki	Impact of isotope effect on divertor strike line broadening in the stochastic magnetic edge of LHD
Agata Czarnecka (IPPLM)	N. Tamura, S. Masuzaki	Impurity transport studies in DD plasma at LHD using VUV/VIS spectroscopy.
Yunfeng Liang (IPP)	Y. Suzuki	Impacts of 3D stochastic boundary on the distributions of heat and particle fluxes on the divertor targets in LHD
Fulvio Auriemma (RFX)	Y. Suzuki	Particle transport studies through cryogenic pellet injection in presence of RMP induced islands
Piero Martin (RFX)	Y. Suzuki	MHD behaviour near stability limits and comparison with tokamaks
Kieran J. McCarthy (CIEMAT)	N. Tamura	TESPEL experiments on LHD
Dmitry Moseev (IPP)	S. Kubo, K. Tanaka	Physics of microwave scattering at LHD and W7-X
José Luis Velasco (CIEMAT)	S. Satake	Parameter dependence of CERC within the International Stellarator- Heliotron Database.
José Luis Velasco (CIEMAT)	S. Satake	Moderation of neoclassical impurity accumulation in high temperature plasmas of helical devices: temperature dependence of the radial electric field.
Uwe Wenzel (IPP)	S. Masuzaki	Study of the physics at the operational limit in LHD and W7-X (Serpent or helical Marfe)

LHD 19th campaign : Theme Group



Theme group	Subjects, Roles	Leaders (NIFS)	Leaders(domestic)
High-Performance	<ul style="list-style-type: none"> •Parameter extension exp. (high-temperature, high-β) •Calibration/Preliminary exp. towards D-exp. •Considerations on D-exp. scenario •Formulation of exp. plans on D-exp. 	<p><u>M.Yokoyama (PI)</u> T.Morisaki, M.Osakabe, M.Isobe (exp. scenario, planning)</p> <p>S.Sakakibara, K.Nagaoka, H.Takahashi (leaders for conducting experiment) T.Akiyama (secretary)</p>	<p>S.Murakami (Kyoto) <u>K.Nagasaki</u> (Kyoto) T.Fujita (Nagoya) Y.Ohya (Shizuoka)</p>
Plasma Physics and Engineering	<ul style="list-style-type: none"> •Peripheral plasma •Steady-state/PWI •Atomic/molecular process •ECH/ICH heating physics 	<p><u>R.Sakamoto (PI)</u> H.Kasahara, M.Tokitani M.Goto Y.Yoshimura</p>	<p><u>M.Sakamoto</u> (Tsukuba) Y.Ueda (Osaka) M.Hasuo (Kyoto) A.Ejiri (Tokyo)</p>
Core physics	<ul style="list-style-type: none"> •MHD stability •EP confinement/MHD •Transport •Perturbative field/3D physics 	<p><u>K.Tanaka (PI)</u> K.Y.Watanabe Y.Suzuki T.Tokuzawa</p>	<p>S.Yamamoto (Kyoto) <u>S.Inagaki</u> (Kyushu) A.Sanpei (Kyoto Inst. Tech) T.Evans (GA) (advisor)</p>
Device engineering	<ul style="list-style-type: none"> •Reliability enhancement of LHD superconducting magnet system for D-exp. 	<p><u>S.Hamaguchi (PI)</u> H.Chikaraishi</p>	

This organization is for 19th campaign, and will be renewed for 20th and 21st campaigns

Machine-time allocated to each TG



- Experiment starts from Feb. 8, expected to continue to early Aug. (tbd).
- Deuterium experiment starts at Mar. 7.
- First half of campaign (till GW) as follows.

Main gas	Polarity of magnetic field	Date	running-in for heating equipments (~12:15)	Stable NBI (The first half: 12:15-15:15, the second-half: 15:45-18:45)
Hydrogen	+	2017/2/6		Magnetic field excitation test
		2017/2/7		Magnetic field excitation test
		2017/2/8	演習訓練	Plasma Physics and Engineering
		2017/2/9	演習訓練	Core Physics
		2017/2/10	演習訓練	Bolonization
		2017/2/13		
		2017/2/14		
		2017/2/15		
		2017/2/16		
		2017/2/17		
		2017/2/20		
		2017/2/21		High-Performance
		2017/2/22		
		2017/2/23		
		2017/2/24		
		2017/2/27		
		2017/2/28		練習
		2017/3/1		
		2017/3/2		
		2017/3/3		
		2017/3/6		
		2017/3/7		
		2017/3/8		
		2017/3/9		
2017/3/10				
2017/3/13				
2017/3/14				
2017/3/15				
2017/3/16				
2017/3/17				
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2017/3/29				
2017/3/30				
2017/3/31				
2017/4/3				
2017/4/4				
2017/4/5				
2017/4/6				
2017/4/7				
2017/4/10				
2017/4/11				
2017/4/12				
2017/4/13				
2017/4/14				
2017/4/17				
2017/4/18				
2017/4/19				
2017/4/20		TBD		
2017/4/21				
2017/4/24				
2017/4/25				
2017/4/26				
2017/4/27				
2017/4/28		TBD		
2017/5/1				
2017/5/2				
2017/5/3				
2017/5/4				
2017/5/5				
2017/5/8				

- High Performance
- Plasma Physics and Engineering
- Core Physics

“Golden week” (Apr. 29 – May 7)

- All the proposals (international/domestic) are now in discussion in each TG for machine-time allocation (stay in contact with your host in NIFS)
- For the latter half of 19th campaign, we will call for the proposals with the due around late Mar./early A